

REMARKS

Claims 32-36 were presented for examination and were rejected. Applicant is hereby canceling claim 36; amending claims 32 and 33; and adding new claims 37-42. Support for all amendments is found in the application as originally filed. Reconsideration of this application as amended, and allowance of all claims herein, claims 32-35 and 37-42, are hereby respectfully requested.

On the Office Action Summary, the Examiner checked box 10 indicating that the drawings filed with the original patent application on March 23, 1999 were objected to by the Examiner. However, the Examiner did not include a Notice of Draftsperson's Patent Drawing Review (PTO-948). The Examiner is requested to send such a Notice to the undersigned as soon as practicable.

Applicant hereby requests that the Examiner approve the minor correction he wishes to make to Figure 3, before Applicant commissions formal drawings. A red-marked copy of Figure 3 is enclosed.

Applicant is amending his specification in numerous places to correct typographical errors and to resolve inconsistencies. Support for all of these amendments is found in the application as originally filed. For example, support for the amendment to page 10 line 18 is found at Figure 8; page 13 lines 27-30; Figure 5b; and page 16 lines 8-9. Support for the amendment to page 10

line 20 is found at page 14 lines 6-15. Support for the amendment to page 10 line 30 is found at page 14 lines 16-20; and page 15 lines 26-30. Support for the amendment to page 11 line 2 is found at page 14 lines 6-15.

Applicant is also hereby submitting a replacement Abstract of the Disclosure. Support for the language in the replacement Abstract of the Disclosure is found in the original application as follows:

Sentence of Replacement Abstract	Support in Original Application
1	Figure 1 and p. 13, lines 17-24
2	Figure 2 and p. 16, lines 24-25
3	Figure 8 and p. 15, lines 22-30
4	Figure 8 and p. 15, lines 22-30
5	p. 15, lines 14-20; and p. 18, lines 12-14
6	p. 14, lines 17-20; p. 13, lines 14-15; and p. 17, lines 22-28
7	p. 16, lines 5-12

In his fifth through ninth paragraphs, the Examiner rejected claims 32-36 under 35 U.S.C. §103(a) as being unpatentable over Cooperman in view of Simmons. The primary reference in the Examiner's rejection is Cooperman. The Examiner cited Simmons solely for its disclosure of a one-way cryptographic hash function.

Cooperman discloses a steganographic process for hiding information within content. The content (i.e., a time series of values such as audio data) is converted, via Fast Fourier Transform (FFT), into a series of amplitudes in the frequency domain (col. 7, lines 5-8). Cooperman's process deviates from standard FFT's by selectively hiding the information in selected frequency bands in the FFT (col. 7, lines 20-22) using a pair of keys (masks). A primary key and a convolution key are randomly generated (col. 8, lines 10-13). The FFT is computed as a series of operations, each involving a particular frequency band and a particular window of the time samples. If the i-th frequency band and the j-th sample in a time sample are being computed, the i-th bit of the primary key and the j-th bit of the convolution key are sent to a Boolean function that outputs either a True or False (col. 8, lines 45-54). If True, the current frequency band is used to encode the information (in a manner that Cooperman does not disclose) and, if False, the current frequency band is ignored (col. 8, lines 58-63). In this way, selected ones of the frequency bands in the FFT are used to encode the information.

Cooperman further discloses that the information comprises cryptographically assured contracts of sale tracking the distribution chain from copyright holder to distributor to publisher to consumer (col. 14, line 9 through col. 15, line 39). If and when an unauthorized copy appears, such sales contract information can be used to track where it came from, because each copy uniquely identifies each link in the distribution chain by which it was transmitted from the copyright owner to the consumer (col. 5, lines 11-29 and 55-56; and col. 15, lines 45-54).

Cooperman fails to suggest at least the following two elements of Applicant's sole independent claim, claim 32, as amended:

1. A method for marking digital data to prevent the data from being copied or transmitted without authorization. Cooperman is not directed at preventing data from being copied or transmitted, but rather towards detecting such copying or transmission after it occurs. Cooperman's mark analysis process is not practical for preventing copying, because Cooperman's analysis process can be performed only by his Authority and Publisher (who are trusted with the secrets used by the "stega-cipher"), and cannot be performed by consumers. Column 13, lines 33-49.

2. A global copyright mask and a content override mask. Cooperman's encoded information is not a global copyright mask

and a content override mask as recited in claim 32, but rather the distribution history of the content.

Applicant defines "global copyright mask" and "content override mask" on page 28 of his specification. The purpose of Applicant's global copyright mask is to identify something as being copyrighted. The purpose of Applicant's content override mask is to indicate when something is allowed to be copied or transmitted. By way of contrast, Cooperman's embedded data serves the vastly different purpose of creating an audit trail of ownership for each copy of a given piece of content. Column 5, lines 55-57. This marks the content, so that "if it is copied, it is possible to determine who owned the original from which the copies were made". Column 3, lines 54-56.

The addition of Simmons' teaching of a one-way cryptographic hash function to Cooperman does not render Applicant's claim 32 non-obvious, because the two references, whether taken together or separately, do not suggest the combination of elements recited in claim 32.

Applicant is hereby introducing six new claims, claims 37-42. New claims 37-40 further limit independent claim 32. Since claims 37-40 are dependent, their patentability follows from the patentability of claim 32. Furthermore, claims 37-42 recite novel features in their own right. For example, claim 39 recites the "copy-once" embodiment described on page 26 lines 19-27 of Applicant's specification, in which the second party (the user)

is allowed to copy or transmit the marked data once, but not more than once. This allows content providers (as one example) to permit television viewers to record digital television transmissions for time-shifting purposes on their home video recorders, without allowing unlimited copying of the content. This copy-once embodiment is not suggested by the prior art.

For the above reasons, the Examiner is requested to withdraw his rejection of claims 32-36; and to allow claims 32-35 and 37-42 as amended.

Applicant believes that this application is now in condition for allowance of all claims herein, claims 32-35 and 37-42 as amended, and therefore an early Notice of Allowance is respectfully requested. If the Examiner disagrees or believes that, for any other reason, direct contact with Applicant's attorney would help advance the prosecution of this case to finality, he is invited to telephone the undersigned at the number given below.

Respectfully submitted,



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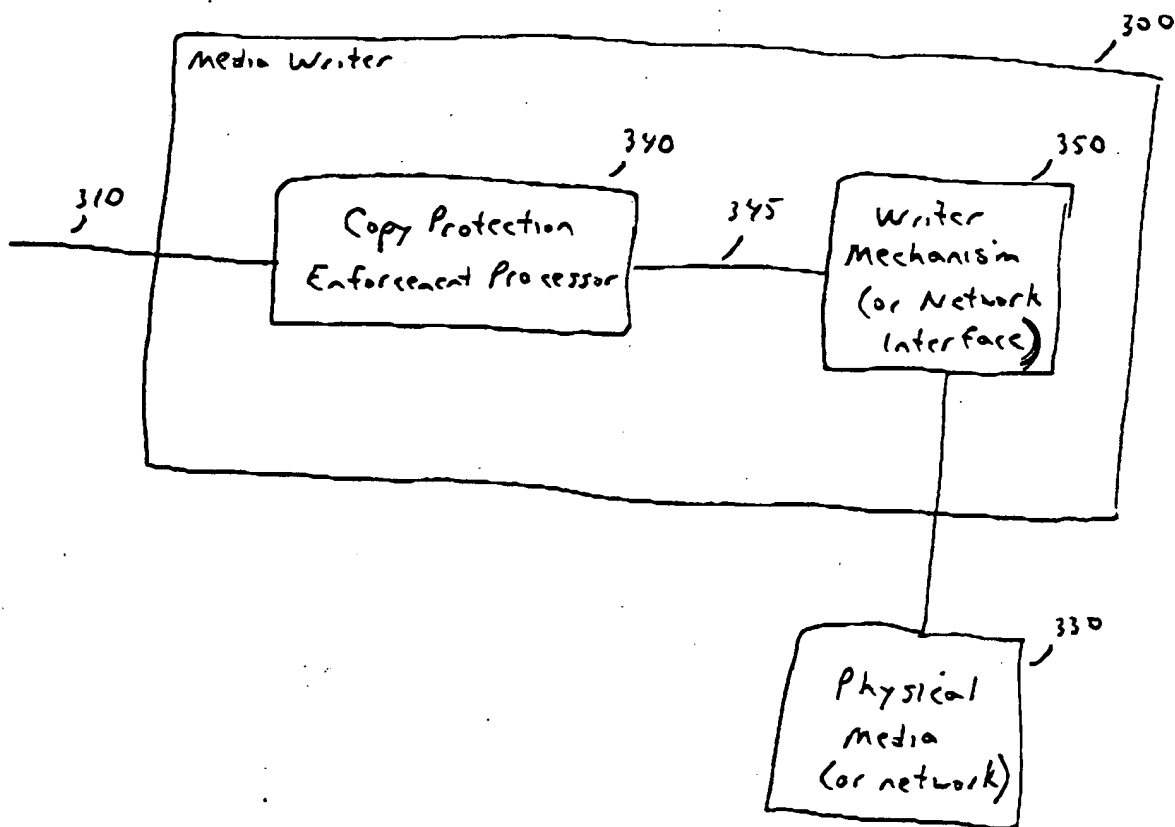


FIGURE 3

Approved
for 4/1/04